

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/110633 A1

BEST AVAILABLE COPY

(51) International Patent Classification⁷: **B02C 23/04**,
18/24, F16D 7/00

(21) International Application Number:
PCT/NO2004/000178

(22) International Filing Date: 17 June 2004 (17.06.2004)

(25) Filing Language: Norwegian

(26) Publication Language: English

(30) Priority Data:
20032814 19 June 2003 (19.06.2003) NO

(71) Applicant (for all designated States except US): **TOMRA
SYSTEMS ASA**; Drengsrudhagen 2, N-1385 Asker (NO).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BERDAL, Tor**
[NO/NO]; Solhaugveien 88A, N-1337 Sandvika (NO).
HOLST LARSEN, Erik [NO/NO]; Øvre Frydendal 11,
N-1384 Asker (NO). **DEHLI, Terje** [NO/NO]; Drengs
vei 46, N-1385 Asker (NO). **SAUGEN, Bernt** [NO/NO];
Burudveien 57, N-1350 Lommedalen (NO).

(74) Agent: **LANGFELDT, Jens, F., C.**; Zacco Norway AS,
P.O. Box 765, Sentrum, N-0106 Oslo (NO).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

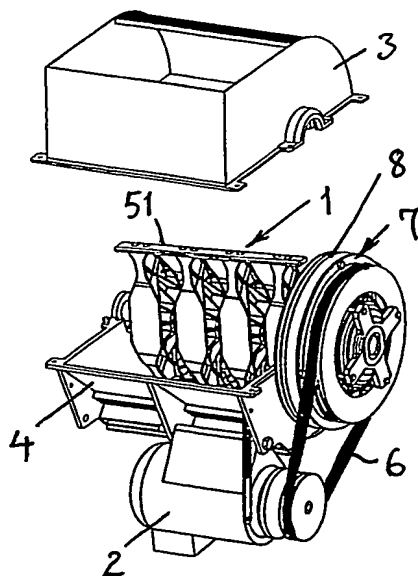
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: **DISINTEGRATOR WITH POWER TRANSMISSION APPARATUS, AND USE THEREOF**



(57) Abstract: An apparatus for disintegrating articles of degradable or non-degradable material, wherein the apparatus has a rotatable knife unit (1) driven by a motor (2), wherein the knife unit blade (51) on rotation of the knife unit in a chamber (4) is designed to move along a chamber wall, and wherein at least a part of the wall has perforations (5). The knife unit (1) is driven by a motor (2) via a mechanical power transmission device (7) which is designed, in the event of a jamming of the knife unit in the chamber or a predetermined working resistance being exceeded, to cause at least partial disconnection of the transmission of power from the device to the knife unit. The power transmission device (7) comprises a flywheel (8) which, in said event of the knife unit jamming or working resistance being exceeded, is at least partly disconnected mechanically from the rotating mass of the knife unit. Operation of the knife unit (1) takes place by means of a motor (2) via the mechanical power transmission device (7) which comprises as part thereof a flywheel (8) and a centrifugal force based clutch mechanism (9) for sudden power engagement with coupling device (10) and thence with the knife unit (1) when the flywheel (8) reaches a predetermined rotational speed.

WO 2004/110633 A1